

# Understanding Influential Comments in Online Conversations

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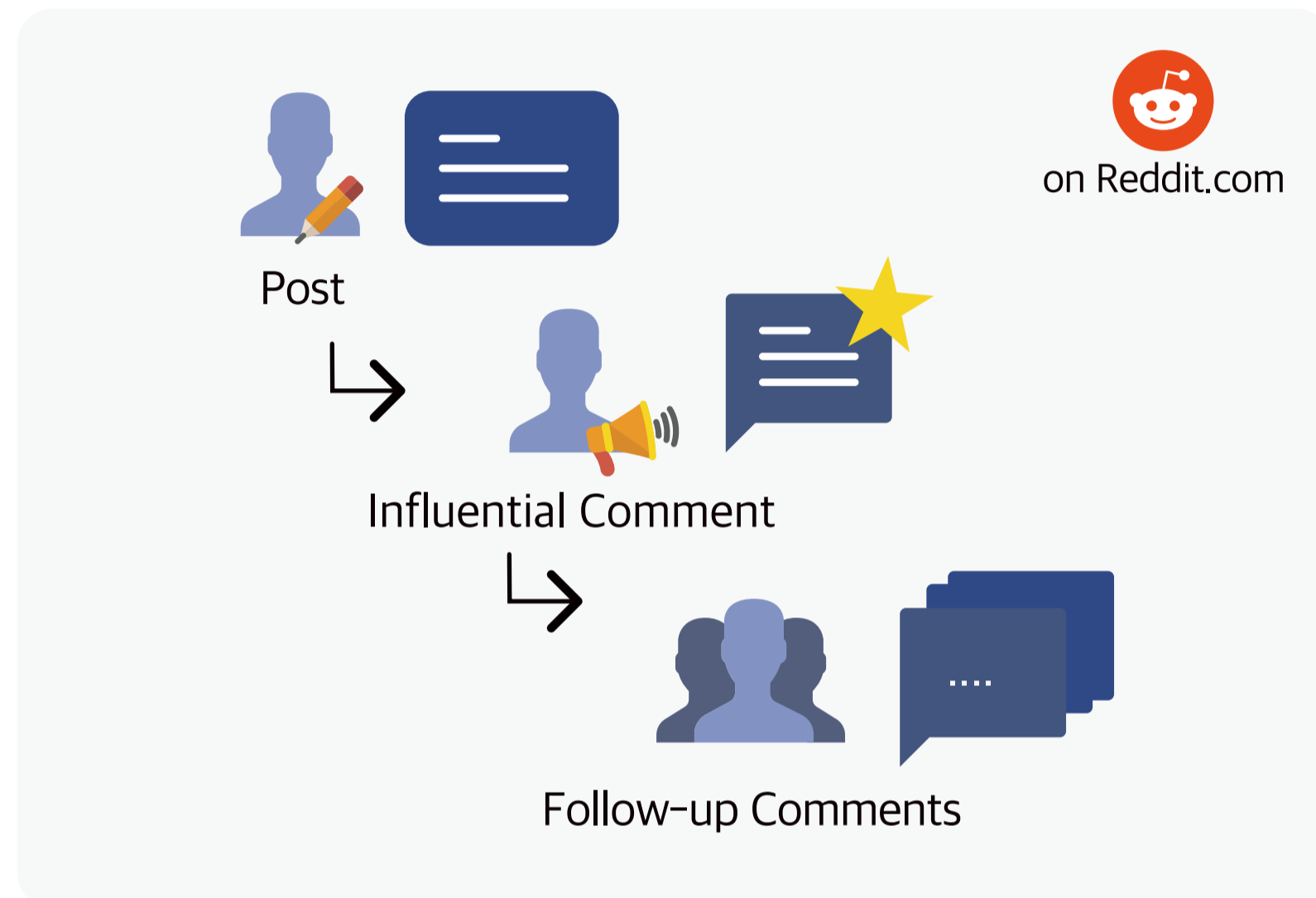
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## Introduction

Roles of 'Influential Comments' in Active Online Conversations?



## Research Questions

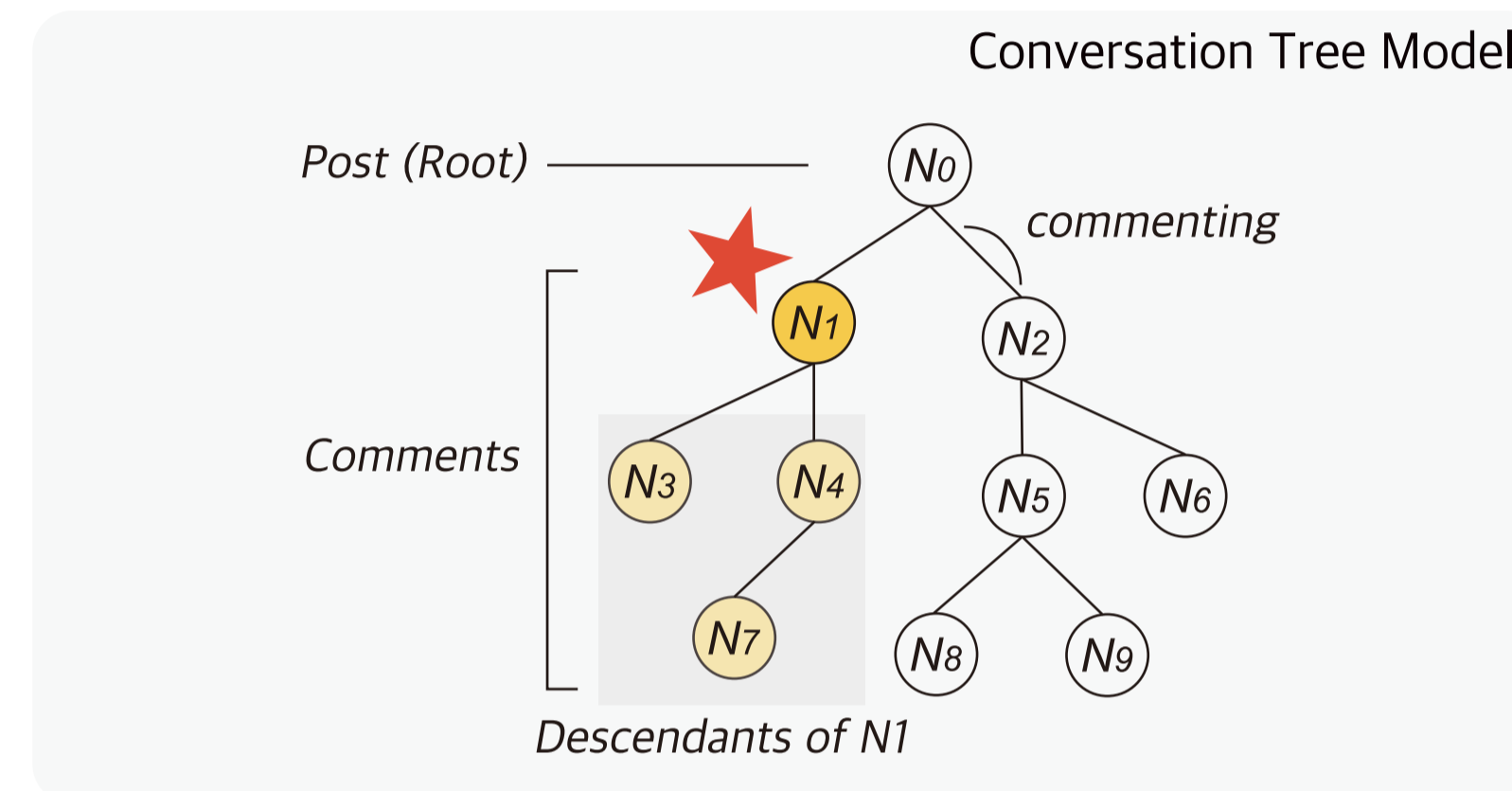
- Q1 How can influential comments be identified?
- Q2 How do the influential comments affect the follow-up comments?

## Dataset

Period	Jan.~July, 2017
Subreddits	News-related 6 subreddits news, uncensored news, world news, uplifting news, true news, fake news
# of Posts	81,663
# of Comments	3,300,415
# of Users	406,213

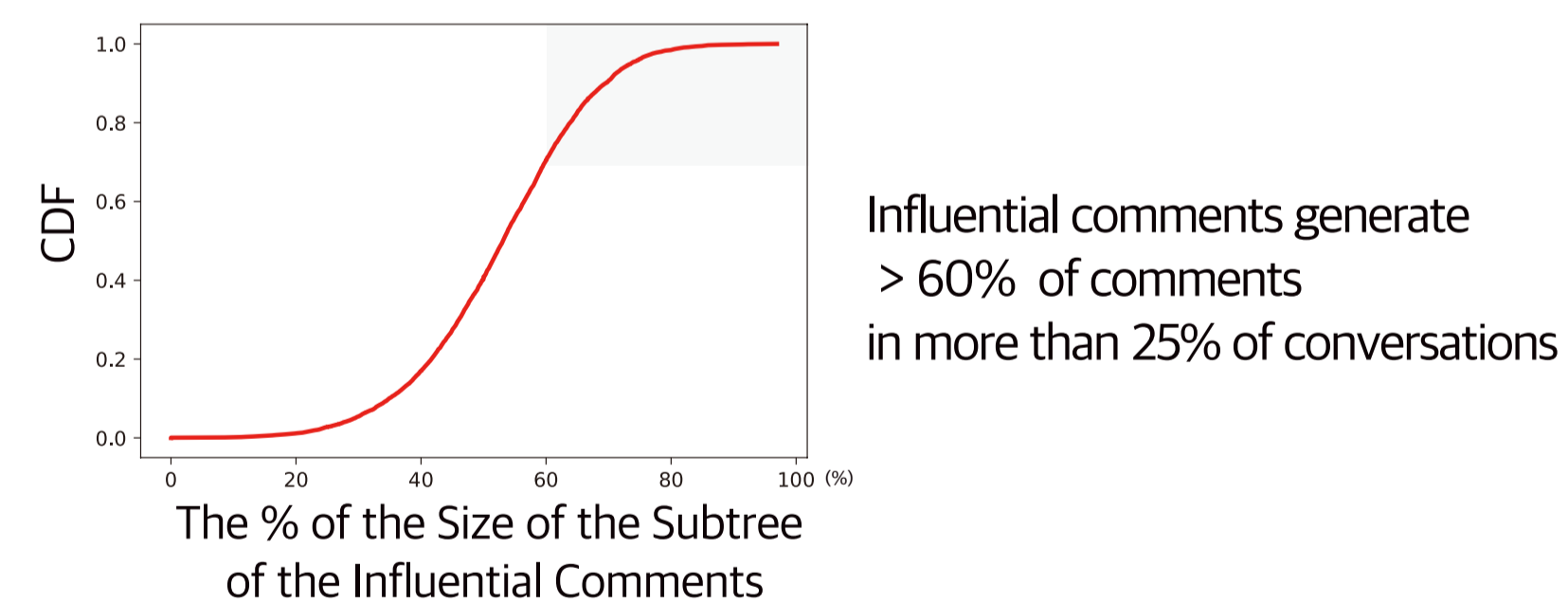
## Identification of Influential Comments

Identify 'Influential Comments' based on Comment Score & Betweenness Centrality in a Conversation tree

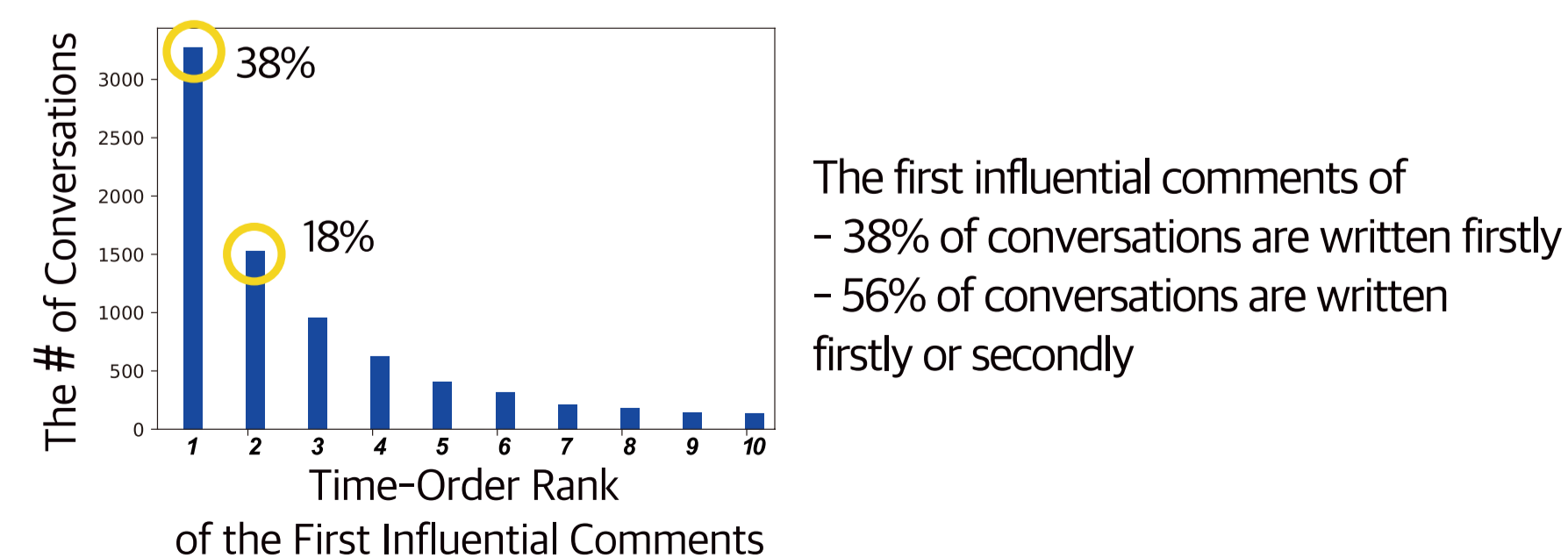


## Characteristics of Influential Comments

Influential Comments contribute to Total Size of Conversation Tree

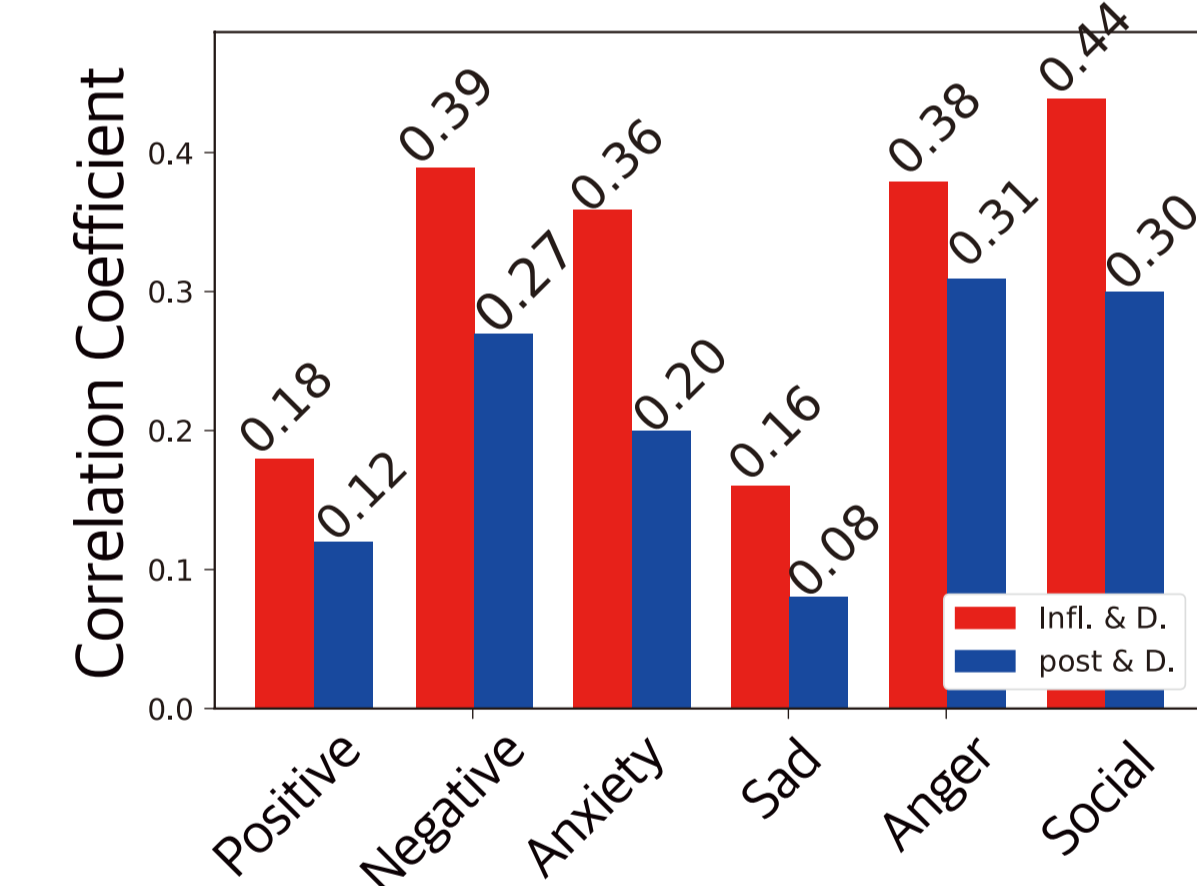
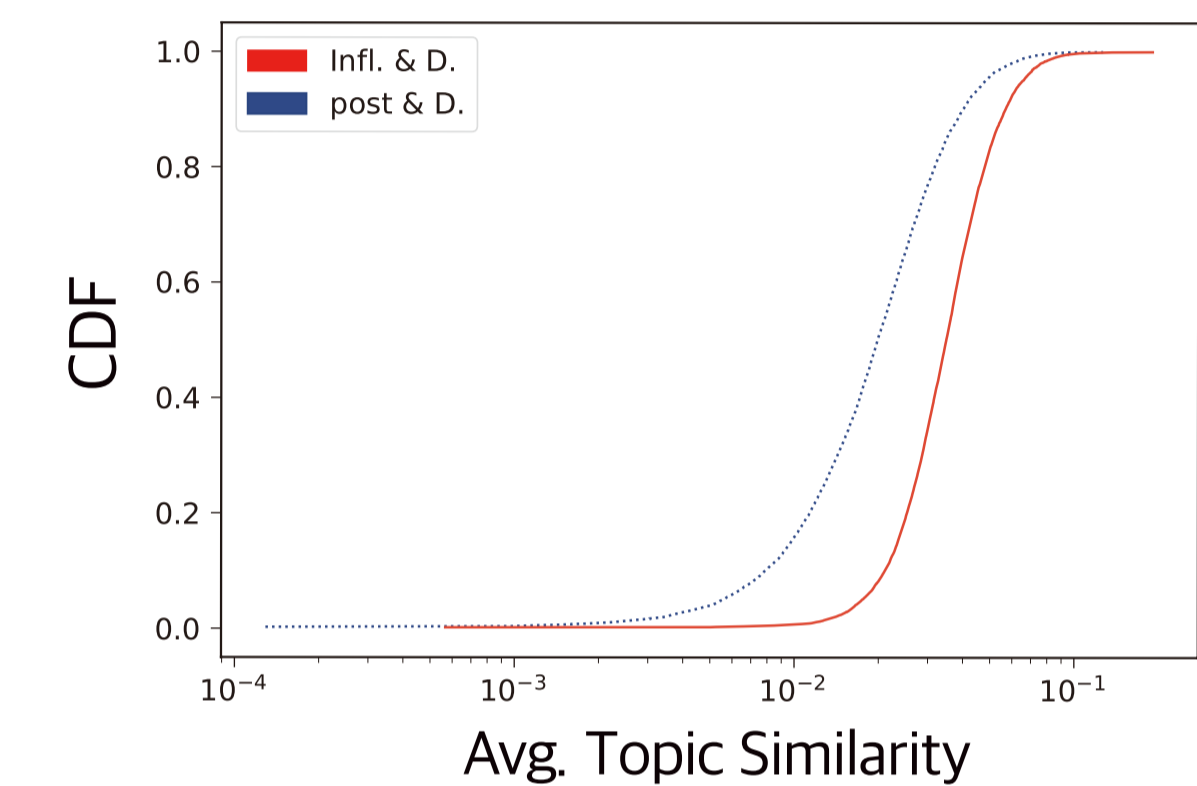


Quick Comments become Influential Comments



## Roles of Influential Comments

Influential Comments affect Follow-up Comments' Topic & Sentiment



- **Topic Similarity** = the cosine similarity between two TF-IDF weighted word vectors
  - 1) between two comments
  - 2) between a comment and a post

- **Sentiment** = LIWC (Linguistic Inquiry and Word Count) Score

## Future Work

- 1) Investigating how troll comments affect other users' opinions
- 2) Developing a model for predicting influential comments in the early stage of a conversation.